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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,020	03/21/2000	Jeffrey Paul Grundvig	GRUNDTVIG 23	7469

7590 04/10/2003  
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Washington, DC 20036-3307

EXAMINER

DAVIS, TEMICA M

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 04/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No.  
**09/532,020**Applicant(s)  
**Grundvig**Examiner  
**Temica M. Davis**Art Unit  
**2681**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Mar 21, 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other:  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 5 and 10-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Borland, U.S. Patent No. 6,343,217.

Regarding claim 1, Borland discloses in a digital cordless telephone system, a full-duplex audio path between a base unit and a remote handset, comprising an unbalanced coding scheme wherein digital audio transmitted in a first direction (i.e. from base unit to handset) over said

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full-duplex audio path is encoded using a first encoding scheme different from a second encoding scheme used to encode digital audio transmitted over said full-duplex audio path in a second direction opposite said first direction (i.e. from handset to base unit) as evidenced by the fact that the handset described in Borland is capable of switching between various coding schemes (col. 5, lines 13-20 and col. 5, line 60-col. 6, line 8), thereby inherently having the coding schemes between the handset and base unit different when the handset switches to a coding scheme in which the base unit is not using.

Regarding claim 2, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein a first encoding algorithm of said first encoding scheme is different from a second encoding algorithm of said second encoding scheme as explained above in instances where the handset switches to a coding scheme in which the base unit is not using (col. 5, line 60-col. 6, line 8).

Regarding claim 3, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein: a bit rate of said first encoding scheme is inherently different from a bit rate of said second encoding scheme (col. 5, line 50-col. 6, line 8).

Regarding claim 5, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein: said first encoding scheme is provided in a base unit of said digital cordless telephone system;

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and said second encoding scheme is provided in a remote handset of said digital cordless telephone system (col. 5, lines 13-20).

Regarding claim 10, Borland discloses a method of providing an unbalanced coding scheme in a digital cordless telephone, comprising: providing a first radio frequency bandwidth for transmission of encoded digitized audio data from a base unit to a corresponding remote handset; and providing a second radio frequency bandwidth inherently different from said first radio frequency bandwidth, for transmission of encoded digitized audio data from said remote handset to said base unit as evidenced by the fact that the handset described in Borland is capable of switching between various coding schemes (col. 5, lines 13-20 and col. 5, line 60-col. 6, line 8), thereby inherently having the bandwidth between the handset and base unit different when the handset switches to a coding scheme in which the base unit is not using.

Regarding claim 11, Borland discloses the method of providing an unbalanced coding scheme in a digital cordless telephone according to claim 10, wherein: said first radio frequency bandwidth is inherently significantly larger than said second radio frequency bandwidth (col. 5, line 50-col. 6, line 8).

Regarding claim 12, Borland discloses an apparatus for providing an unbalanced coding scheme in a digital cordless telephone, comprising: means for providing a first radio frequency bandwidth for transmission of encoded digitized audio data from a base unit to a corresponding remote handset; and means for providing a second radio frequency bandwidth inherently different from said first radio frequency bandwidth, for transmission of encoded digitized audio

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data from said remote handset to said base unit as evidenced by the fact that the handset described in Borland is capable of switching between various coding schemes (col. 5, lines 13-20 and col. 5, line 60-col. 6, line 8), thereby inherently having different bandwidth frequencies between the handset and base unit different when the handset switches to a coding scheme in which the base unit is not using.

Regarding claim 13, Borland discloses the apparatus for providing an unbalanced coding scheme in a digital cordless telephone according to claim 12, wherein: said first radio frequency bandwidth is inherently significantly larger than said second radio frequency bandwidth.

Regarding claim 14, Borland discloses a digital cordless telephone system, comprising: a base unit having an audio encoding scheme of a first type; and a remote handset having an audio encoding scheme of a second type different from said first type as evidenced by the fact that the handset described in Borland is capable of switching between various coding schemes (col. 5, lines 13-20 and col. 5, line 60-col. 6, line 8), thereby inherently having the coding schemes between the handset and base unit different when the handset switches to a coding scheme in which the base unit is not using.

Regarding claim 15, Borland discloses the digital cordless telephone system according to claim 14, wherein: said first type encoding scheme in said base unit has a faster bit rate than said second type encoding scheme in said remote handset (col. 5, line 60-col. 6, line 8).

Regarding claim 16, Borland discloses the digital cordless telephone system according to

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claim 14, wherein: said first type encoding scheme comprises one of A-law and u-law; and said second type encoding scheme comprises one of ADPCM and CELP as evidenced by the fact the system can use a variety of coding schemes (col. 1, line 24-37 and col. 5, line 60-col. 6, line 8).

Regarding claim 17, Borland discloses in a digital cordless telephone system, a full-duplex audio path between a base unit and a remote handset, comprising: an unbalanced coding scheme wherein digital audio transmitted in a first direction over said full-duplex audio path is encoded using a first analog-to-digital conversion precision different from a second analog-to-digital conversion precision used to encode digital audio transmitted over said full-duplex audio path in a second direction opposite said first direction as evidenced by the fact that the handset described in Borland is capable of switching between various coding schemes (col. 5, lines 13-20 and col. 5, line 60-col. 6, line 8), thereby inherently having the coding schemes between the handset and base unit different when the handset switches to a coding scheme in which the base unit is not using.

Regarding claim 18, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 17 wherein: said first analog-to-digital precision is inherently 12 bits or fewer; and said second analog-to-digital precision is greater than 12 bits.

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland.

Regarding claim 4, Borland discloses 4 in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 2 as described above.

Borland, however, fails to disclose wherein a bit rate of said first encoding scheme is substantially equal to a bit rate of said second encoding scheme.

However, the examiner contends that at the time of invention, such a feature would have been obvious to one of ordinary skill in the art since it is known that there are coding schemes having similar qualities with each other, including having a similar bit rate.

Regarding claim 6, Borland discloses in a digital cordless telephone system, the full-duplex 10 audio path between a base unit and a remote handset according to claim 5 as described above.



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Borland, however, fails to disclose wherein said first encoding scheme comprises uncompressed encoding (i.e. ADPCM encoding).

However, uncompressed encoding is well known in the art, as taught in the background of the specification of Borland (col. 1, lines 24-48).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art Borland to use uncompressed encoding since such encoding has been widely used in digital cordless systems for digitally encoding signals.

Regarding claim 7, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 6, wherein: said second encoding scheme comprises ADPCM encoding (col. 1, lines 24-48).

Regarding claim 8, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 7, wherein: said ADPCM encoding has a bit rate of no greater than 32 kb/s (col. 1, lines 24-48).

Regarding claim 9, Borland discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 6, wherein: said uncompressed encoding comprises at least one of p-law and A-law encoding at 64 kb/s (col. 5, line 67-col. 6, line 8).

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*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ganesan et al, U.S. Patent No. 5,812,951, discloses a wireless personal communication system.

Teitler et al, U.S. Patent No. 5,722,086, discloses reducing power consumption in a communications system.

Foster, Jr., U.S. Patent No. 5,528,623, discloses a cordless telephone system having automatic control of transmitter power and frequency in response to changing conditions.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached on Monday-Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached on (703) 305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at (703) 306-0377.

**Any response to this communication should be mailed to:**

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Commissioner of Patents and Trademarks

Washington, DC 20231


**Or faxed to:**

(703) 872-9314 (for any communications intended for entry).

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).*

TMD

April 7, 2003

  
**TEMICA M. DAVIS**  
**PATENT EXAMINER**